

DRAFT

KING COUNTY INTERNATIONAL AIRPORT

STRATEGIC / MASTER PLAN

TECHNICAL REPORT #4

**ASSESSMENT OF COOPERATIVE
APPROACHES TO DRAINAGE**

October 26, 1995

*I have called Dave
for a status report on
this project. Here is a
copy of the motion and
the report he generated.*

*A full copy of the Sajan
report is coming to you.*

Li

KCSlip4 35784

SEA402329

This paper was prepared by:

David Gering

with contributions from
KCIA staff,
BLACK & VEATCH Waste Science, Inc.,
and
the Boeing Company

ASSESSMENT OF COOPERATIVE APPROACHES TO DRAINAGE ISSUES AT KING COUNTY INTERNATIONAL AIRPORT

10/26/95

1.0 INTRODUCTION

King County Motion 9536 (Exhibit 1) invited King County International Airport to assess the potential for cooperating with neighboring jurisdictions and property owners to improve storm water control in the vicinity of the Airport. This motion was proposed in connection with the work of the Duwamish Coalition, a public-private effort to address environmental and economic issues in the Duwamish industrial corridor, where the Airport is located. Pursuant to this motion, Airport staff held a meeting with other jurisdictions and property owners to discuss the potential for cooperative projects in the future. (see Exhibit 2 for participants).

2.0 ASSESSMENT

Stormwater management is an important operational issue at King County International Airport because adequate drainage is essential to aviation operations and the large amount of paved area generates significant runoff. Appropriate stormwater management is also an important environmental responsibility because of the Airport's size (615 acres), the industrial nature of its activities, and its close proximity to the Duwamish River, where Airport stormwater runoff is ultimately discharged. Other jurisdictions with stormwater responsibilities in the area include the cities of Seattle and Tukwila, and the State Department of Transportation (DOT), which is responsible for Interstate 5 just east of the Airport. (See map in Exhibit 3)

Cooperative efforts on stormwater management have occurred on a case-by-case basis among the governments and property owners in the area encompassing the Airport, however, there is no overall policy framework for how these diverse parties might work together to meet present or future stormwater needs, or the requirements of new stormwater regulations. Such cooperation could maximize overall investment and potentially benefit additional landholders.

The Duwamish River has been the focus of significant efforts by Metro and other local, state and federal agencies to maintain water quality in the river. Because of these efforts, the Duwamish River continues to serve as an important natural resource for salmon, steelhead and other wildlife, a primary tribal fishery resource, and as a major industrial resource which, according to the U.S. Army Corps of Engineers, is used to transport 20 million tons of cargo each year.

Additional opportunities for cooperation on stormwater management will be presented in 1996-1997 for the Airport, its tenants and surrounding jurisdictions and property owners. These opportunities will occur through projects identified in a recent study of Airport drainage needs; through development of the new Airport Strategic/Master Plan; and through requirements of a new regional storm water permit issued in July, 1995 to King County, Seattle, Snohomish County and the State Department of Transportation for the Cedar/Green Water Quality Management Area.

The new regional stormwater permit, issued by the State Department of Ecology (DOE) for the Cedar/Green Water Quality Management Area, requires multijurisdictional permittees to engage in more systematic coordination on drainage than currently occurs in the vicinity of the Airport. The coordination required by the permit may be especially valuable in addressing the multiple interjurisdictional issues regarding stormwater management at the Airport and in the larger Duwamish industrial corridor.

Airport management is eager to participate in the broad coordination efforts envisioned by the regional permit. Airport management will pursue opportunities for greater cooperation and coordination in implementing the Airport drainage study and in preparing the Strategic/Master Plan.

Airport staff have begun a process to join the Boeing Company in assessing how coordination opportunities might best be addressed. Boeing staff members have expressed interest in pursuing coordination efforts with the county. This partnership could provide a valuable starting point because Boeing is the largest single tenant at the Airport, and the largest property owner located between the Airport and the Duwamish River. A more detailed description of this proposal can be found at the conclusion to this report.

It should be stressed that to the best of our knowledge, all parties have been in full compliance with stormwater management requirements on an individual basis. The current initiative towards basin-wide cooperative efforts is focused on the economies that could be gained through management of joint systems and the possibility of such regional systems to provide a significant advantage to smaller individual property owners in the Duwamish area.

The remainder of this paper explores opportunities for cooperation presented by the Airport Drainage Study, the Strategic/Master Plan, the DOE permit and related issues.

3.0 AIRPORT DRAINAGE STUDY

The consulting firm, Sajan Inc., has completed a study on behalf of the Airport which analyzed the capacity of Airport piping systems during 25- and 100-year storm events. The study identified three areas on the Airport that need improvements to reduce ponding during these heavier storms. Improvements were also recommended in two pumping stations which help to

remove drainage from the Airport. Although the study primarily focused on capacity rather than environmental concerns, it did define a proposed additional phase of oil/water separator installation. The study recommended that several additional oil water separators be installed to treat water from areas not now covered by oil separators. A budget of \$686,000 was established in 1995 and an additional amount will be requested in 1996 to improve pumps and install new oil separators.

In connection with these improvements, the Airport will explore the potential for collaboration with the Boeing Company to jointly install and maintain oil separators on storm drain lines carrying runoff from both the Airport and Boeing, rather than installing redundant systems. Some portions of the Airport drainage system flow into the system maintained by Boeing.

4.0 AIRPORT STRATEGIC / MASTER PLAN

The Airport is engaged in a new Strategic Master Plan that will examine a variety of Airport development directions and needs, including environmental issues and capital infrastructure improvements.

These efforts may identify infrastructure improvement measures that could be undertaken in partnership with nearby jurisdictions and property owners, since drainage systems and issues at the Airport are already interconnected with neighbors to a certain extent. Some Seattle and Tukwila streets drain into the existing Airport system, and, as stated earlier, some components of the Airport system flow into the Boeing system. The northern end of the Airport is also crossed by DOT drainage lines which directly transport a large volume of runoff from Interstate 5 to the Duwamish River.

Seattle and DOT are currently engaged in drainage projects near the Airport that do not appear to offer any linkages with Airport stormwater management at the present time. In one project, DOT is working with Seattle to install a new system of ditches, ponds and pipes to handle drainage in an area south of the Airport. Seattle is also working on a project to solve ponding problems along Martin Luther King Way southeast of the Airport.

5.0 DOE PERMIT & NPDES SYSTEM

The Airport currently manages its drainage system under an industrial permit obtained in 1993 through the National Pollution Discharge Elimination System (NPDES), which is administered in Washington by the State Department of Ecology (DOE). These permits allow industrial operations to discharge stormwater into waterways only if they comply with certain conditions and standards. The Airport's current NPDES permit expires in November 1995 and application for its renewal has been made.

Some general purpose governments and agencies must also now obtain permits to discharge stormwater into waterways, and, as mentioned, in July 1995, DOE issued a regional NPDES permit for the Cedar/Green Water Quality Management Area to King County, Seattle, Snohomish County and the State Department of Transportation. Held jointly by the jurisdictions, this permit requires them to identify "watershed-wide coordination mechanisms" and establish a schedule to develop "coordinated stormwater management programs for shared waterbodies," such as the Duwamish River. This work is to be performed before the permit expires and must be renewed in the year 2000.

The area encompassing the Airport may be well-suited to the type of coordination required by the permit, since King County, Seattle and DOT share the Duwamish River for stormwater discharge purposes. Tukwila was not required to obtain the NPDES permit because cities with populations less than 100,000 are currently exempt from NPDES requirements. However, Tukwila is an active participant in the Duwamish Coalition, an interjurisdictional effort committed to addressing environmental and economic issues in the Duwamish industrial area.

King County compliance with the permit requirements is the responsibility of the County Surface Water Management Division, which intends to complete a work plan for compliance in early 1996.

6.0 OTHER JURISDICTIONAL ISSUES

Airport stormwater issues pose an unusual jurisdictional issue that might benefit from further review. While the Airport is located entirely within the city limits of Seattle and Tukwila, King County government retains responsibility for stormwater and other land-issues at the Airport under Chapter 15 of the Revised Code of Washington (RCW), governing municipal Airports. Yet, King County pays Tukwila and Seattle \$170,000 per year in surface water management fees, even though it receives no surface water management services from the cities. And although the County Surface Water Management (SWM) Division is responsible for surface water management in unincorporated areas, this function at the Airport is carried out by Airport staff.

In pursuing future cooperative efforts, it may be beneficial to review the payment of Airport surface water management fees and the relationship between the Airport and SWM.

7.0 CONCLUSION

It is reasonable to assume that greater coordination in stormwater planning could lead to more cost-effective approaches to managing runoff in the area encompassing the Airport. However, further study is required to determine the validity of this assumption and feasibility within current regulatory/permit framework.

Representatives from the Boeing Company have expressed interest in pursuing such a study in collaboration with Airport management. Such a study could take advantage of the fact that the Boeing Company and the Airport are each conducting their own separate plans for enhancing storm water systems at and around the Airport. The joint study could include an assessment of current drainage systems, and develop scenarios for establishing common system elements. Such scenarios could include: cost estimates and descriptions of advantages/disadvantages regarding maintenance, responsibility, permit compliance, etc. The effort could also assess the value of adding other property owners and jurisdictions to such a system. This assessment should be conducted and completed during a fixed period of time -- possibly four months -- with results delivered to the County Executive, the County Council, and other parties that may be interested.

This type of study could be initiated by King County Motion. Airport management would be prepared to participate if such a study is approved.

MAY 08 1995

April 5, 1995 KING COUNTY INTERNATIONAL AIRPORT Introduced By: Phillips
Sullivan

Boeing/jl

Proposed No.: 95-174

MOTION NO. **9536**

A MOTION asking the King County Executive to assess opportunities for maximizing benefits of a new stormwater system at Boeing Field/King County International Airport.

WHEREAS, King County joined the Duwamish Coalition to help create a public-private partnership to better address economic and environmental issues in the Duwamish industrial corridor, and

WHEREAS, King County owns and operates Boeing Field/King County International Airport in the Duwamish industrial corridor, and

WHEREAS, King County International Airport and other public facilities contribute to stormwater runoff entering the Duwamish River, and

WHEREAS, Federal and State statutes and regulations require various plans and facilities to protect the environment of the Duwamish, and

WHEREAS, significant upgrades are planned for the airport stormwater control system, and

WHEREAS, the airport stormwater project may present new opportunities for King County to cooperate with other public

ROURETO
HOGGARD
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PATERSON
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PARKS
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1 and private landowners to expand or create systems to improve
2 stormwater control in the Duwamish Industrial corridor, and

3 WHEREAS, improved stormwater control would help to
4 achieve the goals of the Duwamish Coalition to enhance the
5 environment and create new opportunities for economic
6 development;

7 NOW, THEREFORE BE IT MOVED by the Council of King
8 County:

9 1. The Metropolitan King County Council invites the
10 King County Executive and King County International Airport
11 staff to assess opportunities for working with other public
12 and private property owners to maximize the public benefits
13 of the new stormwater system planned for the airport.

14 2. This survey should include, but not be limited to:

15 a. An assessment of tributaries and drainage
16 systems that may be shared by King County, Seattle, Tukwila,
17 the Washington State Department of Transportation and private
18 property owners.

19 b. An assessment of potential facilities needed by
20 the various jurisdictions and private businesses involved in
21 common tributary and drainage systems.

22 c. An assessment of opportunities to reduce or
23 share costs and maximize benefits through development of
24 joint pollution control facilities, such as oil separators or
25 other pollution capture or treatment facilities.

26 d. An assessment of potential opportunities for
27 consolidated operation and maintenance of public and private
28 stormwater pollution control facilities.

1 3. An initial report upon this assessment should be
2 made by June 1, 1995, to the Water Quality and Habitat
3 Committee of the Duwamish Coalition and the Regional Water
4 Quality Committee of the Metropolitan King County Council.

5
6 PASSED by a vote of 13 to 0 this 17th day of

7 April, 1995.

8 KING COUNTY COUNCIL
9 KING COUNTY, WASHINGTON

10 Kent Pullen
11 Chair

12 ATTEST:

13 Gerald A. Peterson
14 Clerk of the Council
15

16
17 Attachments:
18 None

Exhibit 2

**Participants at meeting May 1, 1995, to discuss drainage issues
at and around King County International Airport:**

Associated Grocers	Ray Gooding David McDonald
Boeing Company	Steve Karich Doris Turer Larry West Jeff Zahir
King County International Airport	Dave Gering Jeff Winter
Metro	Jody Heintzman
City of Seattle	Neil Thibert
WSDOT	Erik Hansen Dale Morimoto Steve Sax